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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)



Applicant's or agent's file reference P160	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 03/03370	International filing date (day/month/year) 01.08.2003	Priority date (day/month/year) 01.08.2002
International Patent Classification (IPC) or both national classification and IPC C02F1/36		
Applicant SONICO LTD		

1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 01.03.2004	Date of completion of this report 28.09.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Liebig, T Telephone No. +31 70 340-2746 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/03370**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-19 as originally filed

Claims, Numbers

1-35 received on 26.07.2004 with letter of 23.07.2004

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3-5,7-9,11-21,23-28,30,32,33
	No: Claims	1,2,6,10,22,29,31,34,35
Inventive step (IS)	Yes: Claims	none
	No: Claims	3-5,7-9,11-21,23-28,30,32,33
Industrial applicability (IA)	Yes: Claims	1-35
	No: Claims	none

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

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Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1 Reference is being made to the following documents:

D1: WO0058224

D2: GB2350106

D3: US3672823

D4: US5769913

The document D4 was not cited in the international search report. A copy of the document is appended hereto.

2 According to dependent claim 2 the axially adjacent means for applying ultrasonic energy are said to be "radially displaced by an angle between 0° and 90°". Claim 1 however states that the adjacent means should be radially non-parallel (i.e. > 0°). This is contradictory, as claim 2 depends on claim 1, and the inconsistency between the subject-matter of both claims casts doubt on the intended scope the claims, contrary to the requirements of Article 6 PCT.

3 The subject-matter of claims 1, 2, 6, 10, 22, 29, 31, 34 and 35 is not novel (Article 33(3) PCT).

3.1 Document D1 discloses a fluid processing apparatus for use in an elongate passage, the apparatus comprising a plurality of means for applying ultrasonic energy (D1, fig. 7, reference 16) to fluid within the passage positioned axially along the elongate passage (D1, fig. 7, reference 17), wherein axially adjacent means for applying ultrasonic energy are radially non-parallel and radially non-opposing (D1, fig. 7). D1 further discloses a means for applying ultrasonic energy to fluid (D1, fig. 1), comprising an extender element (D1, fig. 1, reference 8) for projecting an operating member (9) into the elongate passage. The supply-nozzle (5) can be seen as the flushing means for cleaning the extender element. The terms "for directing cleansing media" are not considered to be appropriate to characterise an apparatus, as they refer to a possible use of the apparatus rather than to a technical feature of the apparatus. The subject-matter of claims 22, 29, 31, 34 and 35 is therefore not novel.

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3.2 In view of the unclear wording of claims 1 and 2, mentioned under point 2 above, the document D2 is considered novelty-destroying for claims 1, 6, 10, 31, 34 and 35. Said document discloses a fluid processing apparatus for use in an elongate passage, the apparatus comprising a plurality of means for applying ultrasonic energy (D2, fig. 6, reference 4) to fluid within the passage positioned at different axial positions along the elongate passage (D2, fig. 6, p. 4, l. 9-13), wherein axially adjacent means for applying ultrasonic energy are radially non-parallel and radially non-opposing (D2, fig. 3).

3.3 Document D3 is also novelty-destroying for the subject-matter of claims 1, 2, 31, 34 and 35 - see col. 8, l. 66 to col. 9, l. 25 and figures 7-9.

3.4 Document D4 discloses a fluid processing apparatus for use in an elongate passage (see D4, fig. 1), the apparatus comprising a plurality of means for applying ultrasonic energy (D4, fig. 1, reference 2) to fluid within the passage positioned at different axial positions along the elongate passage, wherein axially adjacent means for applying ultrasonic energy are radially non-parallel and radially non-opposing, the means being radially displaced by an angle of 90° (D4, fig. 1, col. 2, l. 48 to col. 3, l. 6). Consequently, the subject-matter of claims 1, 2, 6, and 10 is also known from D4.

4 Dependent claims 3-5, 7-9, 11-21, 23-28, 30, 32 and 33 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, as they do not appear to contribute to solving the problem posed on p. 2, l. 3-17 of the application.

5 Contrary to Rule 6.2(a) PCT, claims 34 and 35 contain references to the description and/or the drawings. Furthermore, claim 30 depends on claim 31, although both claims are of a different category (apparatus/method).